

Incontinence of Urine

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**Urinary Incontinence (UI) is
involuntary escape of urine**

**Urinary incontinence commonly
affects women of all ages**

**It can seriously affect physical,
psychological and social wellbeing**

TYPES:

1 True incontinence

2 False incontinence

3 Stress or sphincter incontinence

4 Urgency incontinence (precipitancy-detrusor instability or detrusor dyssynergia)

5 Nocturnal enuresis

TYPES: True incontinence:

- caused by abnormal communication between the urinary and genital tracts**
- the urine escapes from the vagina continuously**
- it may be complete or partial**

TYPES: True incontinence:

Complete incontinence means that the patient has continuous escape of urine from the vagina and has no desire to evacuate her bladder at all as in cases with vesicovaginal fistula (all urine escapes from the bladder to the vagina)

Partial incontinence means that the patient has some desire to evacuate her bladder despite the continuous escape of urine from the vagina as in cases with unilateal uretrovaginal fistula

TYPES: False incontinence (Overflow incontinence) :

It is involuntary loss of urine through the urethra following overdistension of the bladder

usually short-term as after vaginal delivery especially if epidural anesthesia is used

can also occur in some neurological diseases as in diabetic neuropathy and multiple sclerosis

TYPES: Urgency incontinenc:

Accounts for approximately 35% of urogynecologic cases. The incidence increases after menopause. The woman feels the desire to micturate but before she reaches the bathroom, all urine passes involuntarily through the urethra.

It is due to irritability of the bladder muscle and so the patient cannot inhibit it.

It may be due to : emotional disturbance, neurologic diseases, and bladder diseases as cystitis, stone or tumour.

TYPES: Stress incontinenc:

It is involuntary escape of few drops of urine through the external urethral meatus on sudden increase of the intra-abdominal pressure as during straining, sneezing, coughing, laughing ... etc.

It may be caused by weakness of the internal urethral sphincter (congenital weakness, vaginal delivery, postmenopausal atrophy) or Descent of bladder neck below the level of the pelvic floor

Diagnosis: History and examination:

A detailed history differentiates between the different types of incontinence and may point to a possible etiology (menopause, vaginal repair or operation in the region of the bladder neck and history of any neurologic disease.)

Presence of distended bladder excessive postvoid residual volume by catheterization or ultrasonography

Diagnosis: diagnostic tests:

- Bonney test
- Yousef Test
- Urine analysis, culture and sensitivity to exclude cystitis.
- Cystourethroscopy
- Ultrasonography
- Urodynamic studies: Cystometry, Uroflowmetry, Urethral Pressure Profilometry, Video-Urodynamics.

Diagnosis: Urodynamic studies :

The primary objective of any investigation is to exclude detrusor instability, because for patients with incontinence caused by detrusor instability, surgery designed to elevate the bladder neck is usually contraindicated as this often results in a worsening of detrusor instability.

Diagnosis: Urodynamic studies : Cystometry:

Cystometry is the measurement of bladder pressure during filling, at capacity and during voiding. The patient is asked to indicate when she experiences the urge to void (usually between 100 and 300 ml), when she is unable to tolerate further filling (usually between 400 and 600 ml)

Diagnosis: Urodynamic studies : Cystometry:

Because the bladder is an intraabdominal organ, any changes that occur in intraabdominal pressure will be reflected in the intravesical pressure. To account for this, intraabdominal pressures are often measured separately. This can be done by measuring the pressure inside the rectum or in the upper third of the vagina. The intravesical pressure can be calculated from the equation:

Detrusor pressure =

¹³
Intravesical pressure - Intraabdominal pressure

Diagnosis: Urodynamic studies : Uroflowmetry :

Uroflowmetry measures the rate of urine flow used for preoperative evaluation of a woman about to undergo bladder neck surgery for genuine stress incontinence.

A poor preoperative flow rate is a poor prognostic feature for postoperative voiding. Because some women void by abdominal contractions, such a maneuver after surgery for stress incontinence will result in closure of the urethra and in postoperative voiding difficulties.

Diagnosis: diagnostic tests:

Patients with detrusor instability (DI) i.e. urgency incontinence often have reduced bladder capacity (< 300 ml) and demonstrate urinary incontinence that is associated with involuntary bladder contractions on Cystometry. There are spontaneous detrusor contractions during the filling phase when the patient attempts to inhibit micturition

Diagnosis: diagnostic tests:

In patients with Genuine Stress Incontinence (GSI), there is an involuntary loss of urine when intravesical pressure exceeds the maximum urethral closure pressure in the absence of a detrusor contraction. The intravesical pressure at which leakage is noted (leak point pressure) is generally < 60 cm of water.

Treatment: Genuine Stress Incontinence :

Nonsurgical:

- Pelvic floor exercise

- Electrical stimulation

- Medical: alpha-adrenergic agonists such as phenylpropanolamine to stimulate the contraction of smooth muscle of the bladder neck and urethra
estrogen therapy for menopausal patients

Treatment: Genuine Stress Incontinence :

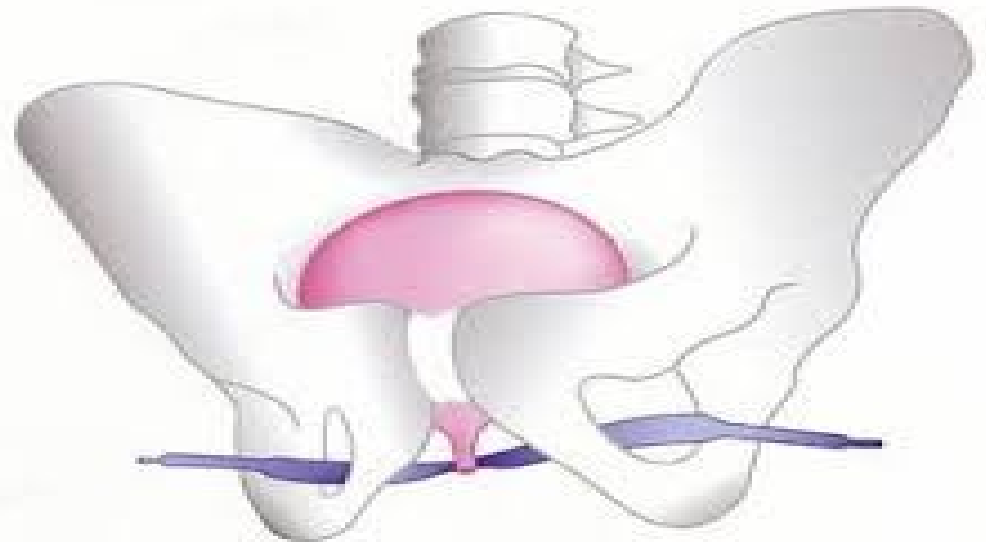
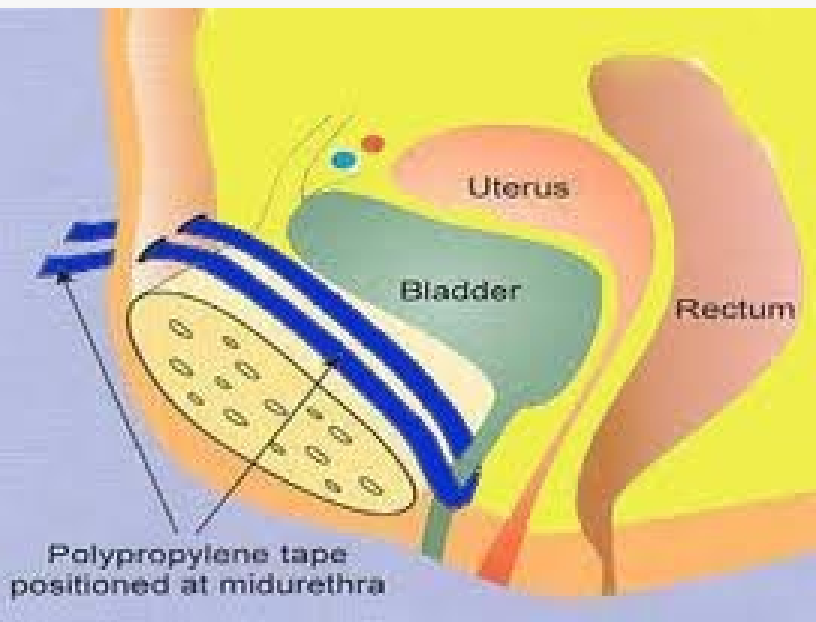
Surgical:

More than 100 surgical procedures have been described for the treatment of Genuine stress incontinence. They can be either through the vaginal or abdominal approach or endoscopically.

Treatment: Genuine Stress Incontinence :

Surgical:

- Periurethral injections: GAX collagen
- Artificial sphincters
- Tension free Vaginal Tape (TVT):



Treatment: Detrusor Instability (DI):

Nonsurgical:

--behavioural therapy: The patient is asked to pass urine every hour during daytime and to increase the interval by 15 minutes every week until she passes urine every 2-3 hours.

--drugs: that inhibit the contractions of detrusor muscle as anticholinergic drugs, tricyclic antidepressants, and ephedrine.

Treatment: Detrusor Instability (DI):

Surgical:

--bladder denervation procedures: selective sacral nerve blockade, sacral neurectomy, and transvaginal bladder denervation.

--bladder augmentation: increasing bladder capacity and interposing a segment of bowel.

--urine diversion: when all the above fail

Genitourinary fistula: Vesicovaginal fistula:

Etiology:

- Obstetric trauma (direct trauma, necrotic fistula)
- Surgical trauma
- Rare causes include:
 - accidental trauma
 - advanced malignancy
 - inflammatory fistula
 - complication of radiotherapy

Genitourinary fistula: Vesicovaginal fistula:

Diagnosis:

- Symptoms & signs
- Methylene blue test
- Cystoscopy

THANK

YOU